**A *SIGNATURE* LAB**

**Lab Report: Molecules of Chalk to Write Member’s Names Names:**

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***Problem:***  How much Calcium Carbonate is used to write your names

***Hypothesis:***

***Experiment:***

# Materials:

* Stick of chalk
* paper cup
* balance

***Procedure:***

1. Use a balance to determine the mass of a clean paper cup. Record the mass in your data table.
2. Get a stick of chalk from the teacher and place them in the cup (each group will have a different colour)
3. Determine the mass of the cup and the chalk. Record the mass in your data table.
4. Each person in the group write the number **4** 20 times on the board using the chalk
5. Determine the mass of the cup and chalk after the names have been written. Record it in your data table.
6. Calculate the mass of chalk used (original mass of chalk – final mass of chalk). Record the answer in your data table.

***Data:***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Mass of Tray (g)** | **Mass of Unused Chalk (g)** | **Mass of Tray + Chalk (g)** | **Mass of Tray + Used Chalk (g)** | **Mass of Chalk Used to Write Names (g)** |
|  |  |  |  |  |

***Conclusions:***

1. What is the molar mass of the chalk, (Assume chalk is 100% Calcium Carbonate – CaCO3)? (Show your work below.) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Convert the mass of used chalk to moles. (Show your work below.) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. How many molecules of chalk were used? (Show your work below.) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Provide 2 possible sources of error in this experiment, explaining **in detail** why you listed each?
5. Explain how you could repeat this experiment. Identify an independent variable which you could modify to investigate for something of your choosing.